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|-----------------|-------------|----------------------|---------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
| 08/996,776      | 12/23/97    | REISER               | K PD-960421         |

MM41/0122

PATENT DOCKET ADMINISTRATION  
HUGHES ELECTRONICS  
BLDG C01 M S A126  
P O BOX 80028  
LOS ANGELES CA 90080-0028

EXAMINER  
PATTERSON, K

ART UNIT 2857  
PAPER NUMBER

DATE MAILED: 01/22/99

Please find below and/or attached an Office communication concerning this application or proceeding.

**Commissioner of Patents and Trademarks**

## Office Action Summary

|  |  |
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| Application No.<br><b>08/996,776</b>     | Applicant(s)<br><b>Reiser, Et. Al.</b> |
| Examiner<br><b>Kendrick P. Patterson</b> | Group Art Unit<br><b>2857</b>          |

Responsive to communication(s) filed on 8 Dec 1998

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

### Disposition of Claims

Claim(s) 1-21 is/are pending in the application.

Of the above, claim(s) 4 and 16 is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-3, 5-15, and 17-21 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's arguments filed 8 December 1998 have been fully considered with respect to the rejection of Claims 1-21 based upon a lack of enablement under 35 U.S.C. 112, first paragraph. Said rejection of Claims 1-21 is moot in view of applicant's amendment to Claims 1-21, filed 8 December 1998. The rejection was premised on Claims 1-21 not being limited to a practical application within the technological arts. For a computer-related invention, the disclosure should enable a skilled artisan to configure the computer to possess the requisite functionality, and, where applicable, interrelate the computer with other elements to yield the claimed invention, without the exercise of undue experimentation. (See MPEP § 2106, Part V.B.2). A non-statutory, abstract process seldom provides such level of enablement. However applicant's amendment has sufficiently amended the claims to recite a practical application to overcome the rejection under 35 U.S.C. 112, first paragraph. Nonetheless, the Declaration under 37 CFR 1.132 filed 8 December 1998 has been fully considered with respect to said rejection of Claims 1-21. It is noted however that the Declaration does not address whether applicant considered the original claims to be limited to a practical application within the technological arts to enable a skilled artisan to practice the invention. However, as discussed above, this matter is moot.

### ***Response to Arguments***

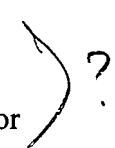
2. Applicant's arguments filed 8 December 1998 have been fully considered with respect to the rejection of Claims 1-21 based upon non-statutory subject matter under 35 U.S.C. 101. Applicant's amendment filed 8 December 1998 is sufficient to overcome said rejections.
3. Applicant's arguments filed 8 December 1998 have been fully considered with respect to the rejection of Claims 1-21 based upon indefinite subject matter under 35 U.S.C. 112, second

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paragraph. Applicant's amendment filed 8 December 1998 is sufficient to overcome said rejections.

***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-2, 5-14, and 17-21, as amended, are rejected under 35 U.S.C. 102(b) as being anticipated by Verly, et. al. (US 5,123,057).

Concerning applicant's Claims 1 and 13, Verly, et. al. discloses a method and apparatus for recognizing an object (Column 7, line(s) 38-40), comprising: a signal processing unit with memory (Column 2, line(s) 64); gathering a set of information from a sensor (Column 6, line(s) 58-60); creating Dempster-Shafer bpa's and combinations of bpa's (Column 27, line(s) 12-45); measuring the error (Column 21, line(s) 35-47); calculating updates (Column 46, line(s) 36-37); and refining the probability assignments (Column 26, line(s) 1-2). Concerning applicant's Claims 2 and 14, Verly, et. al. discloses the set of information comprises rules (Column 28, line(s) 24-25). Concerning applicant's Claims 5-6, Verly, et. al. discloses the set of information comprises object size and/or shape (Column 8, line(s) 56-61; & Column 9, line(s) 6-26). Concerning applicant's Claim 7, Verly, et. al. discloses the set of information comprises heat associated with an object (Column 1, line(s) 43-49). Concerning applicant's Claims 8-11 and 17-20, Verly, et. al. discloses the measuring error step uses a desired result or known desired result (Column 10, line(s) 24-35). Concerning applicant's Claims 12 and 21, Verly, et. al. discloses the updates to the bpa's are calculated using a gradient-descent rule (Column 46, line(s) 27-68). 

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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7. Claims 3 and 15, as amended, are rejected under 35 U.S.C. 103(a) as being unpatentable over Verly, et. al. in view of Levy, et. al. (US 5,339,256).

Concerning applicant's Claims 3 and 15, Verly, et. al. discloses a method and apparatus for recognizing an object, but Verly, et. al. does not disclose expressly the set of information comprises opinions. Levy, et. al. discloses a system for recognizing an object, wherein the set of information used to create Dempster-Shafer basic probability assignments comprises opinions (Column 3, line(s) 56-58). Verly, et. al. and Levy, et. al. are analogous art because they are from the same field of endeavor, i.e. computer-based expert systems. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use the opinions/rules base feature of Gill, et. al. in the expert system of Verly, et. al. The suggestion/motivation for doing so would have been to improve the operational accuracy and efficiency of the expert system by allowing a human operator to influence the system's reasoning process in real-time (See Levy, et. al., Column 3, line(s) 55-58). Therefore it would have been obvious to combine Levy, et. al. with Verly, et. al. to obtain the invention as specified in Claims 3 and 15.

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

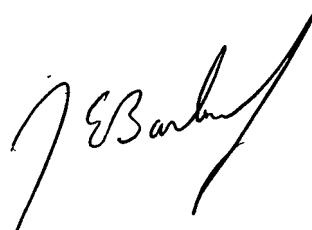
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken Patterson whose telephone number is (703) 305-0650. The examiner can normally be reached on M-F from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow, can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

kpp

January 6, 1999



John Barlow  
Supervisory Patent Examiner  
Technology Center 2800